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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,274	11/26/2003	Eiji Inoue	Q78716	6483

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EXAMINER

LE, DAVID D

ART UNIT	PAPER NUMBER
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3681

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/721,274

Applicant(s)

INOUE, EIJI

Examiner

David D. Le

Art Unit

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 04/05/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This is the first Office action on the merits of Application No. 10/721,274, filed 26 November 2003. Claims 1-6 are pending.

### **Documents**

2. The following documents have been received and filed as part of the patent application:
  - Drawings, received on 04/05/04
  - Information Disclosure Statement, received on 04/05/04
  - Foreign Priority Document, received on 04/05/04

### ***Drawings***

3. The drawings were received on 05 April 2004. These drawings are disapproved for the reason as follows:

Figs. 4 and 5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. **Claims 2-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

**Claims 2-6:**

- Claim 2 (line 21) recites the limitation "a first ring gear". It is unclear whether this "a first ring gear" is different from the one that is first recited one line 11 of claim 1.
- Claim 2 (line 37) recites the limitation "a second carrier". It is unclear whether this "a first ring gear" is different from the one that is first recited one line 15 of claim 1.
- Claim 6 recites the limitations "the intermediate portion of the first power transmission mechanism" and "the intermediate portion of the second power transmission mechanism". There is insufficient antecedent basis for these limitations in the claim.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claims 1-2 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by U. S.**

**Patent No. 6,171,210 to Miyata et al.**

**Claims 1-2 and 6:**

Miyata (i.e., Fig. 14; column 7, line 46 – column 18, line 48) discloses a toroidal type continuously variable transmission system comprising:

- An input shaft (46);
- A toroidal type continuously variable transmission disposed concentrically with the input shaft;
- A first rotation transmission shaft (being shaft 95 or 60) disposed in parallel to the input shaft;
- A first planetary-gear-type transmission (90) disposed on the periphery of the first rotation transmission shaft so as to be concentric with each other, the first planetary-gear-type transmission including a first ring gear (being the ring gear 93);

- A second planetary-gear-type transmission (43) disposed on the periphery of the first rotation transmission shaft so as to be concentric with each other, the second planetary-gear-type transmission including a second carrier (64);
- A second rotation transmission shaft (56) disposed in parallel to the input shaft and the first rotation transmission shaft;
- An output shaft (66) disposed concentrically with the first rotation transmission shaft;
- A first power transmission mechanism for transmitting the rotation of the input shaft to the first ring gear of the first planetary-gear-type transmission (Fig. 14, being the combination of shaft 95, sun gear 91, planet gear 92, carrier 94);
- A second power transmission mechanism for transmitting the rotation of the input shaft through the second rotation transmission shaft to the second carrier of the second planetary-gear-type transmission (Fig. 14, being the combination of gears 54, 57, shaft 56, gears 58, 59, 61, sun gear 62, planet gear 63);
- A switching mechanism (being the low speed clutch 70 and the high speed clutch) for switching power transmission states between the input shaft and the output shaft through the first and second power transmission mechanisms over to each other, wherein, in a state where the power transmission through the first power transmission mechanism is allowed and the power transmission through the second power transmission mechanism is cut off, in accordance

with the control of the transmission ratio of the toroidal-type continuously variable transmission, the output shaft be stopped while leaving the input shaft rotating; (i.e., column 8, line 64 – column 9, line 34)

- Wherein the first and second planetary-gear-type transmissions are respectively of a single pinion type (i.e., Fig. 14);
- Wherein the toroidal-type continuously variable transmission includes:
  - An input side disk (Fig. 14, elements 50a and/or 50b) rotatable together with the input shaft;
  - An output side disk (Fig. 14, elements 51a and/or 51b) supported so as to be concentric with the input side disk and rotated with respect to the input side disk; and
  - A plurality of power rollers (52) respectively interposed between the input side disk and the output side disk;
- A third power transmission mechanism (Fig. 14, being the combination of elements 54, 57, 56, 58, 59, 61, 60, 94, 92, and 91) for allowing the output side disk to drive and rotate the first rotation transmission shaft;
- Wherein the first planetary-gear-type transmission includes:
  - A first sun gear (91) rotatable together with the first rotation transmission shaft;
  - The first ring gear (93) rotatably supported on the periphery of the first sun gear;

- A first carrier (94) supported so as to be concentric with the first sun gear and the first ring gear and can be rotated with respect to the first sun gear and the first ring gear;
  - A plurality of first planetary gears meshingly engaged with the first sun gear and the first ring gear while they are respectively rotatably supported on the first carrier;
- Wherein the second planetary-gear-type transmission includes:
  - A second sun gear (62) rotatable together with the first rotation transmission shaft;
  - A second ring gear (65) rotatably supported on the periphery of the second sun gear and rotatable together with the first carrier;
  - The second carrier supported so as to be concentric with the second sun gear and the second ring gear and rotated with respect to the second sun gear and the second ring gear;
  - A plurality of second planetary gears (63) meshingly engaged with the second sun gear and the second ring gear while they are respectively rotatably supported on the second carrier;
- Wherein the switching mechanism includes a low-speed clutch (70) and the high speed clutch (see Fig. 14);
- Wherein the low-speed clutch is disposed in series with the first power transmission mechanism (see Fig. 14); and



- Wherein the high-speed clutch is disposed in series with the second power transmission mechanism (see Fig. 14).

### *Allowable Subject Matter*

8. Claims 3-5 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### *Conclusion*

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


- Hoge et al. (U. S. Patent No. 6,059,685) teaches a coaxial traction drive automatic transmission as shown in Fig. 1.
- Wittkopp (U. S. Patent No. 6,358,178) teaches a power train as shown in Fig. 1.
- Geiberger et al. (U. S. Patent No. 6,719,659) teaches a continuously variable transmission as shown in Fig. 10.
- Fredriksen et al. (U. S. Patent No. 5,129,867) teaches a hydrostatic split-type multi-speed power transmission as shown in Fig. 2.
- Kemper (U. S. Patent No. 4,856,371) teaches a traction drive transmission system as shown in Fig. 4.
- Tenberge (U. S. Patent No. 5,277,670) teaches a drive train as shown in Fig. 4.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 703-305-3690 or 571-272-7092. The examiner can normally be reached on Mon-Fri (0700-1530).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A Marmor can be reached on 703-308-0830 or 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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**CHARLES A MARMOR**  
SUPERVISORY PATENT EXAMINER  
ART UNIT 3681